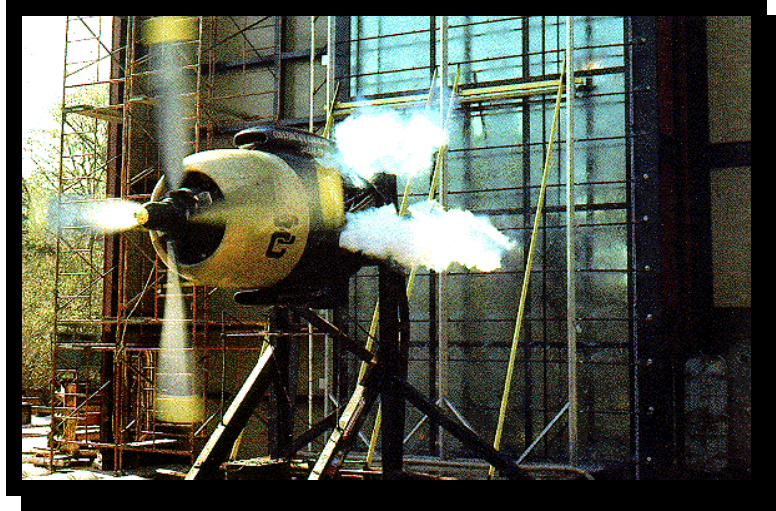




CONSTRUCTION CONSULTING LABORATORY, *INTERNATIONAL*



**TEST REPORT:
AAMA/WDMA/CSA 101/I.S.2/A440-08
INTERNATIONAL WINDOW CORPORATION
SERIES 8220 ALUMINUM SINGLE HUNG WINDOW
REPORT CCLI #11-070**

March 28, 2011

Prepared for:

INTERNATIONAL WINDOW CORPORATION
5625 E. Firestone Boulevard
South Gate, CA 90280

1601 Luna Road
Carrollton, Texas 75006

S-UNITED, INC.
A Quality Control Company

Office: (972) 242-0556
FAX: (972) 245-6047



AAMA/WDMA/CSA 101/I.S.2/A440-08
INTERNATIONAL WINDOW CORPORATION
SERIES 8220 SINGLE HUNG WINDOW
 REPORT CCLI #11-070

March 28, 2011
Page 4 of 4

TABLE OF CONTENTS

1. PROJECT DATA..... 1

2. SUMMARY..... 1

3. TEST SPECIMEN 1

4. PERFORMANCE RESULTS.....3

5. DISCLAIMER4

APPENDIX:

APPENDIX A: INTERNATIONAL WINDOW SERIES 8220 ALUMINUM SINGLE HUNG WINDOW DRAWINGS

Refer to drawings in **Appendix A**. This report is not complete unless these drawings are stamped and initialed by **CCLI** as illustrated below.

Drawing	Part #	Date	Stamped as illustrated
SERIES 8220 ALUMINUM SINGLE HUNG		3/14/05	
HEAD INTERIOR	50494	1/27/05	
HEAD EXTERIOR	50494	1/27/05	
SILL INTERIOR	50496	1/14/05	
SILL EXTERIOR	50495	1/27/05	
JAMB INTERIOR	50498	1/26/05	
JAMB EXTERIOR	50497	1/26/05	
MEETING RAIL INTERIOR	50591	10/3/06	
MEETING RAIL EXTERIOR	50592	10/3/06	
SASH SIDE RAIL INTERIOR	50500	1/27/05	
SASH SIDE RAIL EXTERIOR	50499	1/28/05	
SASH MEETING RAIL INTERIOR	H 50490	1/10/05	
SASH MEETING RAIL INTERIOR	50489	1/11/05	
SASH TOP AND BOTTOM RAIL INT	50502	1/28/05	
SASH TOP AND BOTTOM RAIL EXT	50501	1/28/05	
SASH VINYL THERMAL BREAK	8220-0291	1/19/05	
FRAME VINYL THERMAL BREAK	8220-028	1/5/05	
HEAD THERMAL ISOLATOR	8220-023	1/18/05	
SILL THERMAL ISOLATOR	8220-022	1/18/05	
JAMB THERMAL ISOLATOR	8220-020	1/18/05	



AAMA/WDMA/CSA 101/I.S.2/A440-08
INTERNATIONAL WINDOW CORPORATION
SERIES 8220 SINGLE HUNG WINDOW
REPORT CCLI #11-070

March 28, 2011
Page 4 of 4

1. PROJECT DATA

Project: Series 8220 Aluminum Single Window

Date of Testing: February 18, 2011

Tested For: International Window Corporation
5625 E. Firestone Boulevard
South Gate, CA 90280

Witnessed By: (All or Partial Viewing)

Terry Hopgood International Aluminum
Jeffrey Crump Construction Consulting Laboratory, *International*

2. SUMMARY

Series	Product Type	Test Size	Positive DP	Negative DP
8220	Aluminum Single Hung	3'-11" x 7'-0"	1200 Pa (25 psf)	1200 Pa (25 psf)

3. TEST SPECIMEN

PRODUCT TYPE: Aluminum Single Hung Window, **Product Drawings, Appendix A**
SERIES/MODEL: Series 8220 Aluminum Single Hung Window
SPECIFICATION: AAMA/WDMA/CSA 101/I.S.2/A440-08
LC-PG25-H 1194 x 2134 (47 x 84)

FRAME SIZE: 1194 x 1524 (3'-11"x 7'-0")
SASH SIZE: 1141 x 1067 (3'-8¹⁵/₁₆" x 3'-6")
SASH DAY LIGHT
OPENING: 1095 x 1006 (3'-5¹/₈" x 3'-3⁵/₈")
FIXED DAY LIGHT
OPENING: 1095 x 1003 (3'-5¹/₈" x 3'-3¹/₂")
CONFIGURATION: O/X



AAMA/WDMA/CSA 101/I.S.2/A440-08
INTERNATIONAL WINDOW CORPORATION
SERIES 8220 SINGLE HUNG WINDOW
REPORT CCLI #11-070

March 28, 2011
Page 4 of 4

WEATHER-STRIP: One row of pile weather-strip with integral plastic fin, 5.59mm (0.220") thickness, located at the exterior face perimeter of sash and lateral face of sash stiles.

GLASS: Sealed insulating glass. 2 pcs. 3.175mm ($1/8$ ") annealed glass, 12.7mm ($1/2$ ") air space with a 19.05mm ($3/4$ ") overall thickness. Air spacer consists u-shaped steel.

GLAZING: Sash and fixed members are marine glazed wrap around vinyl channel.

WEEPS: 44.45mm ($1\ 3/4$ ") weep hole with plastic baffle located 31.75mm ($1\ 1/4$ ") from each end of sill exterior face.

SEALANT: Sealant at all frame corners and vent corners. Attachment screws sealed. Each end of fixed interlock sealed to jambs.

HARDWARE: Cam action lock located at center of sash top rail, attached by two (2) #8 x 11.11mm ($7/16$ ") PH pan head tek screws with keeper extruded on the exterior meeting rail (part #50591). One block and tackle balance per sash stile, total of two (2). Handle assembly with wing clip located at each end of sash top rail attached with (2) #8 x $3/4$ " PH Undercut flat head SMS. Metallic pivot bar at each end of sash bottom rail attached with two (2) #6 x 12.7mm ($1/2$ ") screw per bar.

OTHER FEATURES: Frame members are thermally broken with thermal break (part #RS1801). Frame members are coped, butted and attached with two (2), #6 x 25.8mm (1") PH Pan head SMA per connection. Sash members and fixed interlock are thermally broken with thermal break (part #RS1802). Sash corners coped, butted, and attached with one (1), #6 x 50.8mm (2") per connection. Fixed interlock attached to frame jambs with one (1) #8 x 9.52mm ($3/8$ ") square drive pan head tek screw per connection. All frame members use vinyl isolators

INSTALLATION FEATURES: Frame members were attached to SPF, nominal 50.8mm x 203.2mm (2" x 8") test buck with #8 x 50.8 (2") dry wall screws, 114mm ($4\ 1/2$ ") from each end and 406mm (16") on center.



AAMA/WDMA/CSA 101/I.S.2/A440-08
INTERNATIONAL WINDOW CORPORATION
SERIES 8220 SINGLE HUNG WINDOW
REPORT CCLI #11-070

March 28, 2011
Page 4 of 4

4. PERFORMANCE RESULTS

<u>No.</u>	<u>Title of Test</u>	<u>Test Method</u>	<u>Measured</u>	<u>Allowed</u>
5.3.1.1	Operating Force Open Close		53.4N (12.0 lbs) 35.5N (8.0 lbs)	Report Only 180N (40 lbs)
5.3.1.1.3	Latching Devices		4.4N (1.0 lbs)	100N (22.5 lbs)
5.3.2	Air Infiltration @ 75 Pa (1.60 psf)	ASTM E 283-04	.40 L/s•m ² (.08 cfm/ft ²)	1.5 L/s•m ² (0.30 cfm/ft ²)
5.3.3	Water Resistance @ 180 Pa (3.75 psf) with screen @ 180 Pa (3.75 psf) without screen	ASTM E 547-00	No Leakage No Leakage	No Leakage No Leakage
5.3.4.2	Deflections @ Interlock 1200 Pa (25.00 psf) Positive Negative	Max Center Max Center	5.54mm (.218") 6.38mm (.251")	reported reported
5.3.4.3	Uniform Load Structural @ 1800 Pa (37.50 psf) Positive @ 1800 Pa (37.50 psf) Negative -Permanent Set	ASTM E 330-02	No Damage No Damage 1.52mm (.06")	No Damage No Damage 4.57mm (0.180")
5.3.5	Forced Entry Resistance Grade 10	ASTM F 588-07	No Entry	No Entry
5.3.5	Forced Entry Resistance	CAWM-301-96	No Entry	No Entry
5.3.6.3	Deglazing Test Top Rail @ 311N (70 lbs) Bottom Rail @ 311N (70 lbs) Left Stile @ 222 N (50 lbs) Right Stile @ 222 N (50 lbs)		3% 5% 3% 2%	100% 100% 100% 100%



AAMA/WDMA/CSA 101/I.S.2/A440-08
INTERNATIONAL WINDOW CORPORATION
SERIES 8220 SINGLE HUNG WINDOW
REPORT CCLI #11-070

March 28, 2011
Page 4 of 4

Detailed extrusion and assembly drawings indicating measured wall thickness and corner construction are on file and were compared to the test sample submitted. These records will be retained at **CCLI** for a period of four years.

5. DISCLAIMER

The above results were obtained by using the designated test methods indicating compliance with the above specification. This report does not constitute certification of this product, which may only be granted by the program administrator.

CONSTRUCTION CONSULTING LABORATORY, *INTERNATIONAL*

JEFFREY CRUMP
TESTING MANAGER

WESLEY WILSON
LABORATORY MANAGER



AAMA/WDMA/CSA 101/I.S.2/A440-08
INTERNATIONAL WINDOW CORPORATION
SERIES 8220 SINGLE HUNG WINDOW
REPORT CCLI #11-070

March 28, 2011

APPENDIX



AAMA/WDMA/CSA 101/I.S.2/A440-08
INTERNATIONAL WINDOW CORPORATION
SERIES 8220 SINGLE HUNG WINDOW
REPORT CCLI #11-070

March 28, 2011

APPENDIX A

PROJECT DRAWINGS

Drawing	Part #	Date
SERIES 8220 ALUMINUM SINGLE HUNG		3/14/05
HEAD INTERIOR	50494	1/27/05
HEAD EXTERIOR	50494	1/27/05
SILL INTERIOR	50496	1/14/05
SILL EXTERIOR	50495	1/27/05
JAMB INTERIOR	50498	1/26/05
JAMB EXTERIOR	50497	1/26/05
MEETING RAIL INTERIOR	50591	10/3/06
MEETING RAIL EXTERIOR	50592	10/3/06
SASH SIDE RAIL INTERIOR	50500	1/27/05
SASH SIDE RAIL EXTERIOR	50499	1/28/05
SASH MEETING RAIL INTERIOR	H 50490	1/10/05
SASH MEETING RAIL INTERIOR	50489	1/11/05
SASH TOP AND BOTTOM RAIL INT	50502	1/28/05
SASH TOP AND BOTTOM RAIL EXT	50501	1/28/05
SASH VINYL THERMAL BREAK	8220-0291	1/19/05
FRAME VINYL THERMAL BREAK	8220-028	1/5/05
HEAD THERMAL ISOLATOR	8220-023	1/18/05
SILL THERMAL ISOLATOR	8220-022	1/18/05
JAMB THERMAL ISOLATOR	8220-020	1/18/05



AAMA/WDMA/CSA 101/I.S.2/A440-08
INTERNATIONAL WINDOW CORPORATION
SERIES 8220 SINGLE HUNG WINDOW
REPORT CCLI #11-070

March 28, 2011

- END OF REPORT -